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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 02/05/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/400,350

Applicant(s)

TEGREENE ET AL.

Examiner

Kevin M. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The request for reconsideration filed on 11/18/2003 has been fully considered but they are not persuasive. The rejection of claim 27 is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Neukermans et al (US 5,629,790).

As to claim 27, Neukermans et al teach a scanner which includes a primary mirror 82 (fig. 5a), a resonant reflector (a mirror 82 and a coil 85, fig. 5a);

the primary mirror 82 (fig. 5a) and the resonant reflector (the mirror 82 and the coil 85, fig. 5a) perform the function of the scanning frequency is a integral multiple of the resonant frequency;

the resonant reflector (the mirror 82 and the coil 85, fig. 5a) is a microelectromechanical membrane;

deformation of the membrane (the torsional scanner 12 twists in one direction then twists in an opposite direction, fig. 1c, col. 3, lines 36-38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClelland et al (US 6,201,629) in view of Swartz et al (US 6,102,294).

As to claim 27, McClelland et al teach a scanner which includes a primary mirror 3 (fig. 1) that moves through a predetermined scan path at a selected scan rate having a scanning period that defined a scanning frequency; and a coil 31(fig. 8D) and a mirror 3 (fig. 1) disposed on the support 4 (fig. 8A) are a resonant reflector 31 (fig. 8D) aligned to the scanning mirror 3 (fig. 1) and being of a type that moves resonantly through a movement path at a resonant frequency, wherein the scanning frequency is a integral multiple of the resonant frequency (see figures 1 and 8D, column 8, lines 51-58 and column 11, lines 20-41).

McClelland et al fail to teach a related scanner which includes a microelectromechanical membrane having deformation of the membrane. However, Swartz et al teach a scanner which includes deformable mirror 150 (figure 11A, column 7, lines 8-10). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the deformable mirror 150 taught by Swartz et al for the mirror disclosed in the scanner of McClelland because this would improve miniaturized, increased flexibility bar code scanner, while fabricating mirror simpler at low cost (column 1, lines 39-46 of Swartz et al).

Response to Arguments

4. Applicant's arguments filed 11/18/2003 have been fully considered but they are not persuasive.

In response to applicant's argument that claim 27 recites "the scanning frequency is an integral multiple of the resonant frequency wherein the resonant reflector is a microelectromechanical (MEMs) membrane." This argument is not persuasive because Neukermans et al's invention teaches microelectromechanical (MEMs) membrane (the micro scanner mirror 192, fig. 11, col. 10, lines 10-11) and a coil 85 perform the function of the scanner 192 can be tuned to an integral multiple of the horizontal scan frequency (please see page 27, lines 11-21 of the specification for additional explanation of MEMs scanner of Neukermans '790 patent).

In response to applicant's argument that claim 27 recites "the movement path includes deformation of the membrane." This argument is not persuasive because Neukermans et al's invention teaches the torsional scanner 12 twists in one direction then twists in an opposite direction (fig. 1c, col. 3, lines 36-38).

In response to applicant's argument that [recited in page 5, lines 4-5]. Examiner clarifies: a coil 31 and a mirror 3 that disposes on the support 4 are a resonant reflector and align to the scanning mirror 3 (see fig. 1, 8A, 8D, col. 7, lines 33-35).

In response to applicant's argument that claim 27 recites "the scanning frequency is an integral multiple of the resonant frequency wherein the resonant reflector is a microelectromechanical (MEMs) membrane and wherein the movement path includes deformation of the membrane." This argument is not persuasive because McClelland et

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al reviews the micro scanner mirror is a microelectromechanical (MEMs) membrane (see col. 1, lines 20-2). Swartz et al teaches a scanner which includes deformable mirror 150 (figure 11A, column 7, line 9). These arguments are not persuasive because the combination teaching of McClelland and Swartz will perform the scanning frequency is an integral multiple of the horizontal scan frequency.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the deformable mirror 150 taught by Swartz et al for McClelland's mirror because this would improve miniaturized, increased flexibility bar code scanner, while fabricating mirror simpler at low cost (column 1, lines 39-46 of Swartz et al).

For these reasons, the rejections based on Neukermanns, McClelland, and Swartz have been maintained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)


Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
January 29, 2004


XIAO WU
PRIMARY EXAMINER